WHAT IS CLAIMED IS:

1. A method of recovering a soil-based disposal trench that has a biomat slime, the method comprising the step of adding facultative anaerobic bacteria to an effluent that flows into the disposal trench.

2. The method of claim 1 wherein the facultative anaerobic bacteria added to the effluent consumes the biomat slime faster than the biomat slime can be formed.

3. The method of claim 1 wherein the facultative anaerobic bacteria added to the effluent stream substantially replace strict aerobic bacteria in the disposal trench that convert nitrites to nitrates.

4. The method of claim 1 wherein the effluent flows from a treatment vessel that holds a waste material.

5. The method of claim 4 wherein the step of adding facultative anaerobic bacteria to an effluent that flows into the disposal trench includes:

circulating the waste material in the treatment vessel, the waste material including the effluent, the effluent including ammonia; and

adding facultative anaerobic bacteria to the treatment vessel, circulation of the waste material causing the effluent that flows into the disposal trench to include facultative anaerobic bacteria.

6. The method of claim 5 wherein the facultative anaerobic bacteria added to the effluent consume the biomat slime faster than the biomat slime can be formed.

7. The method of claim 5 wherein the facultative anaerobic bacteria added to the effluent substantially replace strict aerobic bacteria in the disposal trench that convert nitrites to nitrates.

8. The method of claim 4 wherein the step of adding facultative anaerobic bacteria to an effluent that flows into the disposal trench includes:

aerating and circulating the waste material in the treatment vessel, the waste material including the effluent, the effluent including ammonia; and

adding facultative anaerobic bacteria to the treatment vessel, circulation of the waste material causing the effluent that flows into the disposal trench to include facultative anaerobic bacteria.

9. The method of claim 8 wherein the aerating and circulating step is performed with an aerator bubbling air in the treatment vessel.

10. The method of claim 9 wherein the aerating and circulating step substantially reduces, or eliminates, a number of anaerobic bacteria that are present in the treatment vessel.

11. The method of claim 8 and further comprising the step of adding a bacterial host material to the treatment vessel, the facultative anaerobic bacteria colonizing the bacterial host material.

12. The method of claim 11 wherein the aerating and circulating step causes an air and waste material flow, and the bacterial host material is placed to be bathed in the air and waste material flow.

13. The method of claim 11 wherein the aerating and circulating step forms an aerobic region within the vessel that supports the growth of the facultative anaerobic bacteria.

14. The method of claim 13 wherein the facultative anaerobic bacteria are added to the treatment vessel in numbers which allow the facultative anaerobic bacteria to become the dominant, if not the exclusive, bacteria that are present in the aerobic region.

15. A method of operating a waste treatment vessel, the waste treatment vessel holding waste material, the method comprising the steps of:

aerating and circulating the waste material in the treatment vessel until a predetermined number of a first type of strict aerobe and a second type of strict aerobe have colonized the treatment vessel, the first type of strict aerobe converting ammonia to nitrites, the second type of strict aerobe converting nitrites to nitrates; and

adding facultative anaerobic bacteria to the treatment vessel, the facultative anaerobic bacteria added to the effluent substantially replacing the second strict aerobic bacteria in the treatment vessel that converts nitrites to nitrates.

16. The method of claim 15 and further comprising the step of adding a bacterial host material to the treatment vessel, the first strict aerobic bacteria and the facultative anaerobic bacteria colonizing the bacterial host material.

17. A waste treatment device comprising:

an air diffuser having a bubble output side that provides bubbles of air evenly across a diameter of a column that extends away from the bubble output side;

a bacteria container/applicator positioned within the column a predetermined distance away from the bubble output side of the diffuser, bubbles passing by the bacteria container/applicator causing a bacteria to be released into a flow; and

a structure that contacts the bacteria container/applicator and the bacterial host material to position the bacteria container and the bacterial host material in the column.

18. The device of claim 17 wherein the bacteria is a facultative anaerobic culture.

19. The device of claim 18 wherein the structure is a compressed air line connected to the air diffuser.

20. The device of claim 17 and further comprising a bacterial host material positioned within the column a predetermined distance away from the bubble output side of the diffuser, the bacterial host material being non-corrosive, the bacteria in the flow from the bacteria container/applicator growing on the bacterial host material.

21. The device of claim 18 wherein the structure is a frame connected to the diffuser, and further comprising:

a compressed air line connected to the air diffuser; and

an air compressor connected to the compressed air line.

22. The device of claim 17 and further comprising a column-shaped housing having a first end and a second end, the diffuser, the bacterial container/applicator, and the bacterial host material fitting within the housing so that the column fits within the column-shaped housing.

23. The device of claim 6 wherein the bacteria is a facultative anaerobic culture.

24. The device of claim 23 wherein the column-shaped housing has openings at the first end and openings at the second end, bubbles rising from the first end to the second end.

25. The device of claim 22 wherein the structure is a pipe positioned within the column so that the longitudinal axis of the pipe is parallel with the longitudinal axis of the column-shaped housing, an end of the pipe being positioned a predetermined distance away from the bubble output side of the diffuser, the bacteria container/applicator being positioned within the pipe, the bacterial host material contacting both the pipe and the column-shaped housing.

26. The device of claim 25 wherein the column-shaped housing can have any cross-sectional shape.

27. The device of claim 25 wherein the bacteria is a facultative anaerobic culture.

28. The device of claim 26 wherein the column-shaped housing can have any cross-sectional shape.

29. The device of claim 26 and further comprising:

a compressed air line connected to the air diffuser; and

an air compressor connected to the compressed air line.

30. A method of operating a waste treatment device, the waste treatment device comprising:

an air diffuser having a bubble output side that provides bubbles of air evenly across a diameter of a column that extends away from the bubble output side;

a bacteria container/applicator positioned within the column a predetermined distance away from the bubble output side of the diffuser, bubbles passing by the bacteria container/applicator causing a bacteria to be released into a flow;

a bacterial host material positioned within the column a predetermined distance away from the bubble output side of the diffuser, the bacterial host material being non-corrosive, the bacteria in the flow from the bacteria container/applicator growing on the bacterial host material; and

a structure that contacts the bacteria container and the bacterial host material to position the bacteria container and the bacterial host material in the column,

the method comprising the steps of:

placing a facultative anaerobic culture in the bacteria container;

forcing air into the diffuser so that air bubbles rise up through the column, bubbles passing by the bacteria container causing bacteria from the culture to be released into a flow; and

directing the flow into a soil treatment system.

31. The method of claim 30 wherein the bacteria from the culture that is in the flow grows and reproduces on the bacterial host material.

32. The method of claim 30 wherein the device further comprises a column-shaped housing having a first end and a second end, the diffuser, the bacterial container/applicator, and the bacterial host material fitting within the housing so that the column fits within the column-shaped housing.

33. The method of claim 32 wherein the structure is a pipe positioned within the column so that the longitudinal axis of the pipe is parallel with the longitudinal axis of the column-shaped housing, an end of the pipe being positioned a predetermined distance away from the bubble output side of the diffuser, the bacteria container/applicator being positioned within the pipe, the bacterial host material contacting both the pipe and the column-shaped housing.

34. The method of claim 30 and further comprising the step of forming a nitrifying bacteria on the bacterial host material prior to placing the facultative anaerobic culture in the bacteria container/applicator.

35. The method of claim 34 wherein the nitrifying bacteria is formed by placing a nitrifying bacterial culture in the bacteria container/applicator for a predetermined period of time before placing the facultative anaerobic culture in the bacteria container/applicator.

36. The method of claim 33 wherein the nitrifying bacteria is formed by forcing air into the diffuser so that air bubbles rise up through the column for a period of time when the bacteria container/applicator includes no bacterial culture prior to placing the facultative anaerobic culture in the bacteria container/applicator.